FISHER COLLEGE OF BUSINESS – HONORS THESIS IN FINANCE

The Impact of Corporate Social Responsibility on Stock Returns: Evidence from the U.S. Stock Market

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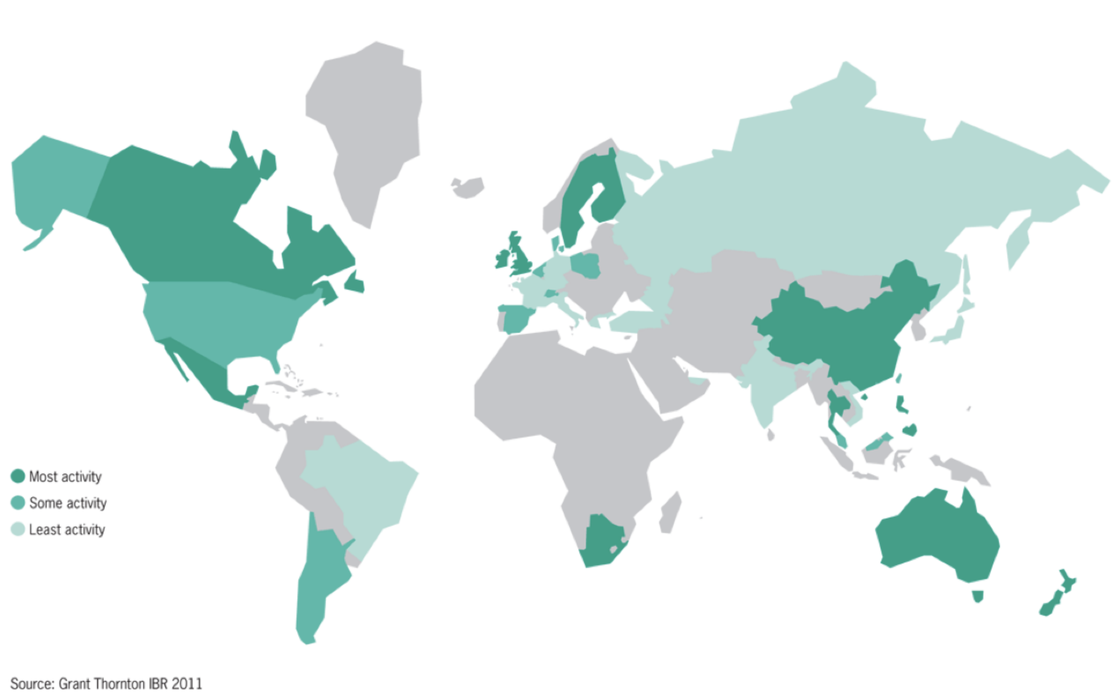
INTRODUCTION

Corporate social responsibility, often abbreviated "CSR," is a company's practices and initiatives to take responsibility for the benefit of society. The field of CSR has become a fast-growing part of long-lasting enterprises in the recent decade. Businesses in the United States have also been very committed to CSR initiatives over the past few years. Figure 1 shows the levels of the activity of CSR undertaken in 2010 around the world. In this figure, we can see that in the U.S., level of CSR activity was relatively high.

The nature of CSR is based on the interests and connections of the external relations between the stakeholders such as the company, operators and its shareholders, and how they see and expect the realization of the sustainable development of the company. As we know, the economic prospect of one company is reflected by its stock return and volatility. Will CSR affect the stock returns and the efficiency of the capital market? The answer for this question will help improve the performance of the U.S. stock market.

Figure 1: World CSR Heat Map



AIM

- Examine the impact of CSR on the stock returns of U.S. publicly-traded companies that constitute S&P Composite 1500 Index, based on the stock performances during 2000-2014.
- Help people get a newer and better understanding of the CSR performance.
- Provide some insights for the publicly-traded companies and their investors:
  1) How much should I invest in CSR activities?
  2) Does socially responsible investment outperform conventional investment?

HYPOTHESES

Hypothesis 1

Hypothesis 1a: Company with a higher overall CSR rating score will incur lower stock returns.

Hypothesis 1b: Overall CSR rating score of one company will not have a significant impact on its stock returns.

Hypothesis 2

Hypothesis 2a: Corporate Governance category has the most significant negative influence on stock returns.

Hypothesis 2b: Social or Environmental category has the most significant negative influence on stock returns.

METHODS

I. Sample Selection

- S&P 1500 Component Companies

II. Dependent Variable

- Stock Returns (r_t) – Monthly stock returns from 2000-2014

III. Independent Variable

- Corporate Social Responsibility Indicators (From KLD STATS)
  1) Environmental Performance (**ENV_{t-1}**)
  2) Corporate Governance Performance (**GOV_{t-1}**)
  3) Social Performance (**SOC_{t-1}**)
  4) Aggregated CSR rating score (**KLD_{t-1}**)
- Also control for Stock Performance Variables
  1) Natural Logarithm of Book-To-Market (**$LNBTM_{t-1}$**)
  2) Natural Logarithm of Market Cap (**$LNCAP_{t-1}$**)
  3) Return on Equity (**ROE_{t-1}**)
  4) Last year's return (**r_{t-1} or RET_{t-1}**)

IV. Methodology

- Aggregate vs. Disaggregate Measure
- Cross-sectional one-year lagged regression analyses - Every month, regress individual stock returns on their CSR scores as well as the other control variables from the previous year
- Assess the effect of three CSR indicators, and all three variables are compared with the aggregated KLD

METHODS Cont.

V. Regression Equations

- **Disaggregate**

$$r_{i,t} = \beta_0 + \beta_1 ENV_{i,t-1} + \beta_2 GOV_{i,t-1} + \beta_3 SOC_{i,t-1} + \epsilon_t$$

$$r_{i,t} = \beta_0 + \beta_1 ENV_{i,t-1} + \beta_2 GOV_{i,t-1} + \beta_3 SOC_{i,t-1} + \beta_4 LNBTM_{i,t-1} + \beta_5 LNCAP_{i,t-1} + \beta_6 ROE_{i,t-1} + \beta_7 r_{i,t-1} + \epsilon_t$$

- **Aggregate**

$$r_{i,t} = \beta_0 + \beta_1 KLD_{i,t-1} + \epsilon_t$$

$$r_{i,t} = \beta_0 + \beta_1 KLD_{i,t-1} + \beta_2 LNBTM_{i,t-1} + \beta_3 LNCAP_{i,t-1} + \beta_4 ROE_{i,t-1} + \beta_5 r_{i,t-1} + \epsilon_t$$

RESULTS

Figure 2: Average Performance Score of CSR Indicators

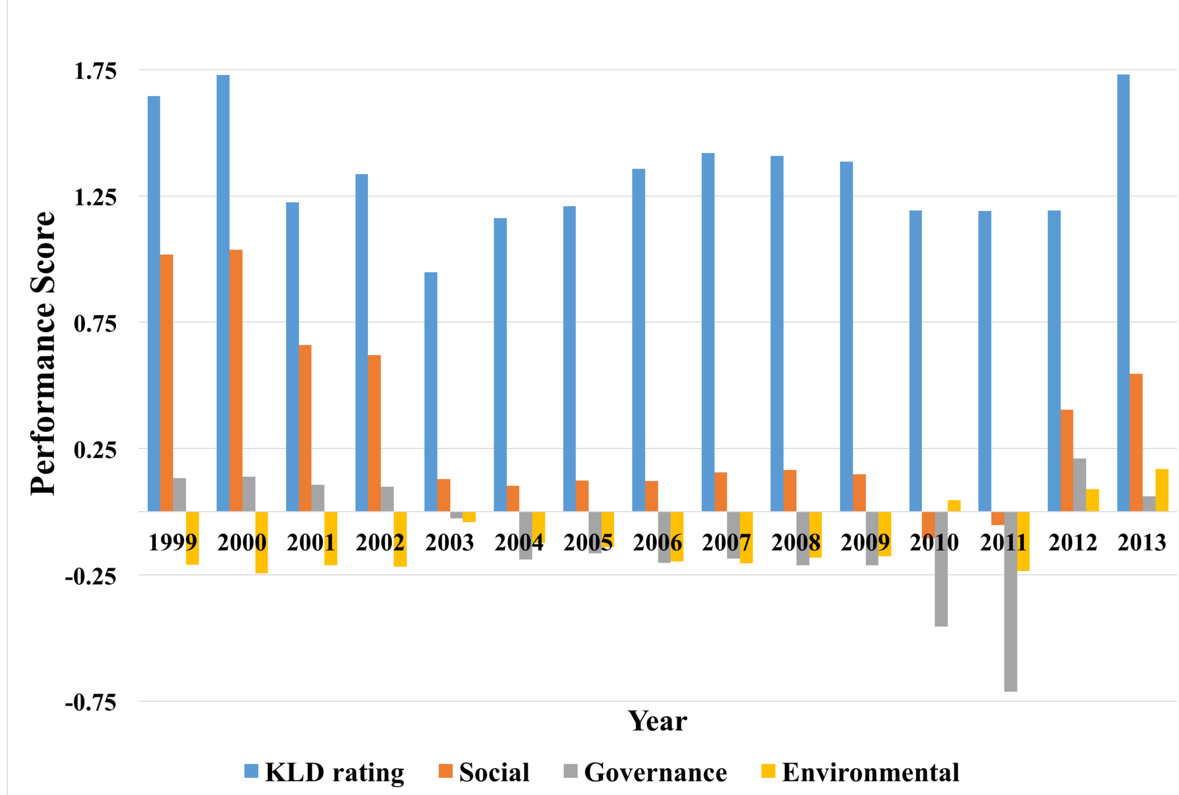


Figure 3: Cross-Sectional Regression Analyses

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4
Constant	0.0157***	0.0156***	0.0223***	0.0229***
	(3.63)	(3.61)	(3.43)	(3.46)
KLD_{t-1}	-0.000248*		-0.00021*	
	(-1.70)		(-1.65)	
$LNCAP_{t-1}$			-0.000816	-0.000861
			(-1.49)	(-1.52)
$LNBTM_{t-1}$			0.002072**	0.002067**
			(2.10)	(2.09)
ROE_{t-1}			-0.001977**	-0.001968**
			(-1.99)	(-1.97)
RET_{t-1}			-0.018908***	-0.019556***
			(-2.62)	(-2.73)
SOC_{t-1}		-0.000379		-0.000229
		(-1.45)		(-0.99)
GOV_{t-1}		-0.000526**		-0.000539**
		(-2.29)		(-2.35)
ENV_{t-1}		-0.00071		-0.00072
		(-1.44)		(-1.58)

t statistics in parentheses
* p<0.1, ** p<0.05, *** p<0.01

CONCLUSIONS

I. Interpretations

- This analysis indicates a significant negative correlation between the overall aggregated CSR rating score and stock returns.
- Corporate Governance is the only indicator found to be statistically significant and inversely correlated with stock returns.
- Environmental performance has a stronger, though statistically non-significant, negative impact on stock returns compared to Social and Corporate Governance performance scores.
- Based on four cross-sectional models, the analyses in this study indicate that taking the CSR initiatives will in fact have negative effect on the stock performance as well as the development of the company.

II. Insights

- *For companies:*

1) In Figure 2, companies tend to contribute, and perform the best in Social activities. This may indicate that, in these years, companies have realized the smallest negative effect of the Social activities on stock returns.
2) We cannot deny the fact that conducting CSR activities has many benefits, but sometimes, it is hard for companies to obtain a balance between the costs and benefits of CSR.

- *For investors:*

1) Expect socially responsible investment (SRI) underperformance because of the loss of diversification.
2) Altruistic shareholders are willing to forego returns to become socially responsible and have moral feeling.

III. Recommendation: *Voluntary or Mandatory?*

- Government can introduce the CSR legislation or mandatory regulation, and companies always with high CSR performance scores will be affected less by such regulation.

IV. Future research

- Conduct event studies to examine the impact of company's announcement of CSR activities, or the impact of company's change in CSR policy on the stock prices, and find the abnormal returns.

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